

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A system for monitoring wafer throughput per hour in a wafer furnace, comprising:

- a database that includes two or more operation histories of the wafer furnace;
- an analysis unit, the analysis unit being coupled to the database, the analysis unit including:
 - logic that retrieves at least one operation history from the database;
 - logic that determines a standard process time for the retrieved at least one operation history and a specification range; and
 - logic that receives a current process time for ~~the~~ a current process;
- a comparison unit coupled to the analysis unit, the comparison unit including logic that compares the standard process time and the specification range to the current process time; and
- an output unit coupled to the comparison unit and including logic that outputs a comparison result.

Claim 2 (Original): The system of claim 1, wherein the standard process time is a mean process time of the at least one retrieved operation history.

Claim 3 (Original): The system of claim 1, wherein when the at least one retrieved operation history includes a single operation history, the specification range is about equal to the mean process time of the at least one retrieved operation history.

Claim 4 (Original): The system of claim 1, wherein when the at least one retrieved operation history includes a plurality of retrieved operation histories, the specification range is a range of mean process times of each of the retrieved operation histories that excludes at least one of a maximum mean process time and a minimum mean process time.

Claim 5 (Original): The system of claim 1, wherein the specification range is about equal to a predetermined range about the mean process time of the retrieved at least one operation history.

Claim 6 (Original): The system of claim 1, wherein each of the two or more operation histories includes a process time for a plurality of wafers during a specified time frame.

Claim 7 (Original): The system of claim 6, wherein the current process time includes the process time of a most recently completed batch.

Claim 8 (Original): The system of claim 6, wherein the specified time frame includes a single operator shift.

Claim 9 (Original): The system of claim 6, wherein the specified time frame includes a single operator day that includes two or more operator shifts.

Claim 10 (Original): The system of claim 1, wherein the comparison result is a warning when the current process time falls outside the specification range.

Claim 11 (Original): The system of claim 1, further comprising an access unit that accesses the database.

Claim 12 (Original): The system of claim 1, wherein the two or more operation histories of the wafer furnace excludes overlapping processes.

Claim 13 (Original): The system of claim 1, wherein the two or more operation histories of the wafer furnace excludes manual processes.

Claim 14 (Original): The system of claim 1, wherein the comparison result includes a user notification.

Claim 15 (Original): The system of claim 1, wherein the output unit outputs a comparison result when the received current process time is not within the specification range.

Claim 16 (Currently Amended): A method for monitoring wafer throughput per hour in a wafer furnace, comprising:

retrieving at least one operation history from a database that includes two or more operation histories of the wafer furnace;

determining a standard process time for the at least one retrieved operation history and a specification range;

receiving a current process time for ~~the~~ a current process;

comparing the standard process time and the specification range to the current process time; and

outputting a comparison result.

Claim 17 (Original): The method of claim 16, wherein the standard process time is a mean process time of the at least one retrieved operation history.

Claim 18 (Original): The method of claim 16, wherein when the at least one retrieved operation history includes a single operation history, the specification range is about equal to the mean process time of the retrieved at least one operation history.

Claim 19 (Original): The method of claim 16, wherein when the at least one retrieved operation history includes a plurality of operation histories, the specification range is a range of mean process times of each of the retrieved operation histories that excludes at least one of a maximum mean process time and a minimum mean process time.

Claim 20 (Original): The method of claim 16, wherein the specification range is equal to a predetermined range about the mean process time of the retrieved at least one operation history.